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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,373	07/29/2003	Sridevi Narayan-Sarathy	20435-00141-US	4318
30678	7590	08/19/2005	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ LLP			BERMAN, SUSAN W	
SUITE 800			ART UNIT	
1990 M STREET NW			PAPER NUMBER	
WASHINGTON, DC 20036-3425			1711	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,373

Applicant(s)

NARAYAN-SARATHY ET AL.

Examiner

Susan W. Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed 06/13/2005 have been fully considered but they are not persuasive.

The instant claims have been amended to exclude a substantial amount of exogenous photoinitiator from the oligomeric composition. Applicant argues that Ostlie discloses compositions that comprise at least one acylphosphine oxide photoinitiator. Ostlie teaches amounts of photoinitiator as small as 0.1 % of the composition. Thus the phrase "substantial absence of exogenous photoinitiator" is not considered to be sufficient to distinguish over the teaching of Ostlie. Furthermore, Moy et al teach that the liquid oligomers disclosed can be crosslinked using UV light without adding photoinitiators (column 1, lines 5-8). Moy et al further teach that it is the pendant methyl ketone substituents that serve as internal photoinitiator (column 12, lines 47-63).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 51, the phrase "Michael Addition reaction product", does not make clear that the Michael addition product is a polyacrylate having more than one pendent unsaturated acrylate functional groups. Claims 57 and 58 are unclear because they recite that the monoacrylate "is present up to about 0... mol %". It is suggested that the claims read "present in amounts from greater than 0 to about ...mol %".

With respect to claims 7-9, it is noted that the claims are not limited to the particular molar acrylic ratio set forth but merely state what the ratio would be for the diacrylate, triacrylate or tetracrylate. With respect to claims 25-26, it is noted that the claims are not limited to compositions wherein the multifunctional acrylate Michael acceptor is a triacrylate or a tetraacrylate, but merely set forth what the

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triacylate or tetraacylate would be if present. With respect to claims 27-30, it is noted that the claims are not limited to the particular β -dicarbonyl Michael donors set forth but merely state what the β -dicarbonyl Michael donors would be if present.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostlie (5,876,805) in view of Moy et al (5,945,489). Ostlie discloses photopolymerizable thiol-ene compositions wherein the -ene compound can be a multifunctional acrylate compound and the thiol compounds disclosed correspond to those set forth in the instant claims. See column 3, lines 43, to column 4, line 19, and the Examples. Ostlie teaches adding amounts of photoinitiator as small as 0.1 % of the composition. Moy et al disclose Michael addition reaction products of acetoacetate functional donor compounds and multifunctional acrylate receptor compounds that are acrylate functional products that can be further crosslinked to make coatings, laminates and adhesives. Furthermore, Moy et al teach that the liquid oligomers disclosed can be crosslinked using UV light without adding photoinitiators (column 1, lines 5-8). Moy et al further teach that it is the pendant methyl ketone substituents that serve as internal photoinitiator (column 12, lines 47-63). Moy et al do not teach compositions comprising a polythiol.

The differences between the instantly claimed invention and the teachings of Ostlie are (1) Ostlie does not teach polyacrylates that are organic soluble, ungelled, uncrosslinked Michael addition reaction products and (2) Ostlie requires a photoinitiator, although the amount can be as little as 0.1% of the composition. It would have been obvious to one skilled in the art at the time of the invention to employ the Michael addition reaction products taught by Moy et al as the polyacrylates in the polyene-polythiol

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compositions disclosed by Ostlie. Ostlie provides motivation by teaching that several different kinds of polyacrylate compounds are suitable in the disclosed compositions as long as the compounds are multifunctional acrylate compounds. Moy et al provide motivation by teaching that the disclosed Michael addition reaction products can be crosslinked without adding costly photoinitiators and can be added to other resins (column 2, lines 5-24). One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a composition useful for providing coatings of plastic, wood and metal substrates by reaction of polyacrylate-functional and thiol-functional compounds, as taught by Ostlie. It would further have been obvious to one skilled in the art at the time of the invention to omit the photoinitiator in the compositions taught by Ostlie when employing the polyacrylates taught by Moy et al. Moy et al provide motivation by teaching that the pendant methyl ketone groups in the disclosed polyacrylates serve as internal photoinitiator and that the oligomers can be crosslinked using UV light without adding other photoinitiators.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman
Primary Examiner
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SB
8/17/05